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09/516,090	03/01/2000	Walter Wesley Howe	99-003	2870

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EXAMINER

GANTT, ALAN T

ART UNIT	PAPER NUMBER
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2684

DATE MAILED: 07/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/516,090

Applicant(s)

HOWE, WALTER WESLEY

Examiner

Alan T. Gantt

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 25-27 is/are allowed.
- 6) ☒ Claim(s) 1-17, 19-21 and 28-30 is/are rejected.
- 7) ☒ Claim(s) 18 and 22-24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1, 2, 4, 9, 10, 13, 14, and 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Ho et al.

Regarding claim 1, Ho discloses a method and system for allowing the routing of calls from a gateway mobile switching center to a visiting mobile switching center by reducing the number of home location register and visitor location register inquiries. The method and system makes it unnecessary to query the HLR and VLR when a land-to-mobile call arrives (col. 2, lines 3-28). A server is considered here to be an inherent component of a data processing system that handles databases. Also, “a mobile identification number” is read more broadly than “the mobile

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identification number, i.e., any assigned number that identifies the mobile station. Ho meets the following limitations:

- Receiving by a server data destined for the mobile terminal (col. 4, lines 53-65).
- Identifying a mobile identification number associated with the mobile terminal (col. 4, lines 43-53).
- Determining a route that excludes a home node associated with the identified mobile identification number when a visited node serves the identified mobile identification number (col. 5, lines 18-41).
- Sending the received data to the mobile terminal on a connection initiated by the server and established via the determined route (col. 4, line 66 to col. 5, line 41).

Regarding claim 2, Ho meets the following limitations:

- Receiving by the server data from the mobile terminal on the established connection (col. 4, lines 53-65).
- Sending to the wireline terminal the data received from the mobile terminal (col. 4, line 66 to col. 5, line 41).

Regarding claim 4, Ho meets the following limitation:

- Sending the data by the wireline terminal to the server to establish communication with the mobile terminal (col. 4, line 66 to col. 5, line 41).

Regarding claim 9, Ho meets the following limitation:

- Requesting the route from a home location register serving the identified mobile identification number (col. 2, lines 11-22).

Regarding claim 10, Ho meets the following limitation:

- Receiving from a home location register serving the identified mobile identification number a temporary local directory number for establishing the connection to the mobile terminal (col. 4, line 11 to col. 5, line17).

Regarding claim 13, Ho meets the following limitation:

- Initiating a call by the server to the mobile terminal based on a temporary location directory number received from a home location register associated with the mobile terminal (col. 4, line 11 to col. 5, line17).

Regarding claim 14, Ho meets the following limitation:

- initiating a call by the server to the mobile terminal based on a temporary location directory number received from the visited node serving the identified mobile identification number (col. 4, line 11 to col. 5, line17).

Regarding claim 29, Ho discloses a method and system for allowing the routing of calls from a gateway mobile switching center to a visiting mobile switching center by reducing the number of home location register and visitor location register inquiries as stated above for claim

1. A computer-readable medium capable of configuring a computer to perform this method and

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the required steps are inherent to the system. A server is considered here to be an inherent component of a data processing system that handles databases. Thus, Ho meets the following limitations:

- Receiving from the wireline terminal data destined for the mobile terminal (col. 4, lines 53-65);
- Identifying a mobile identification number associated with the mobile terminal (col. 4, lines 43-53);
- Determining a route that excludes a home node associated with the identified mobile identification number when a visited node serves the identified mobile identification number (col. 5, lines 18-41);
- Establishing a connection via the determined route to the mobile terminal (col. 4, line 66 to col. 5, line 41);
- Sending the data to the mobile terminal on the established connection (col. 4, line 66 to col. 5, line 41).

3. Claim 15-17, 28 and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Wang.

Regarding claim 15, Wang discloses a method and system integrating wireless/wireline and circuit /packet networks for cellular /PCS services so that GSM subscribers roaming into CDMA networks using IP networks (col. 2, lines 48-59). Wang meets the following limitations:

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- Assembling by the wireline terminal data into one or more data packets (col. 10, lines 6-21)
- Sending the data packets to a server for communicating the data packets to the mobile terminal on a connection initiated by the server such that the connection is established via a route that excludes a home node associated with the mobile terminal when the mobile terminal resides outside of a geographical area served by the home node (col. 8, lines 34-52).

Regarding claim 16, Wang meets the following limitation:

- Including in the data packets an identifier associated with the mobile terminal (col. 6, lines 28-44).

Regarding claim 17, Wang meets the following limitation:

- Including in the data packets an Internet Protocol (IP) address associated with the server and the mobile terminal (col. 4, lines 50-61 and col. 6 lines 28-44).

Regarding claim 28, Wang discloses a method and system integrating wireless/wireline and circuit /packet networks for cellular /PCS services so that GSM subscribers roaming into CDMA networks using IP networks (col. 2, lines 48-59). Wang meets the following limitations:

- A home node serving a mobile terminal when the mobile terminal is in a geographical area served by the home node (col. 1, lines 15-20);
- A visited node serving the mobile terminal when the mobile terminal is outside of the geographical area served by the home node (col. 1, lines 15-20).

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- A server for receiving from a wireline terminal one or more data packets destined for the mobile terminal, and for determining a route that excludes the home node when the mobile terminal is served by the visited node, and for establishing via the determined route a connection to the mobile terminal, and for sending the data packets on the established connection to the mobile terminal (col. 8, lines 34-52).

Regarding claim 30, Wang discloses a method and system integrating wireless/wireline and circuit /packet networks for cellular /PCS services so that GSM subscribers roaming into CDMA networks using IP networks and includes H.323 servers. Wang meets the following limitations:

- Receiving data destined for the mobile terminal (col. 7, lines 1-8).
- Providing a route that excludes a home node associated with the mobile terminal when a visited node serves the mobile terminal for communicating received data (col. 8, lines 34-52).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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5. Claims 3, 5- 8, 11, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ho et al., in view of Wang et al.

Regarding claim 3, which includes the following limitation:

- Determining by the server another route that includes the home node when the home node serves the identified mobile identification number.

Ho provides for the gateway MSC seeking a MSRN (roaming number) from the HLR for the mobile station but is silent regarding what happens when there is no MSRN returned.

The examiner takes Official Notice that it is well known for the server to choose a route that includes the home node when the home node is currently serving a MIN that is based within that node and at the time of the applicant's invention it would have been obvious to modify Ho include recognizing that mobile station is located within to the home cell and providing the call setup at the home cell to reduce network traffic.

Regarding claim 5, Ho discloses a method and system for allowing the routing of calls from a gateway mobile switching center to a visiting mobile switching center by reducing the number of home location register and visitor location register inquiries. The method and system makes it unnecessary to query the HLR and VLR when a land-to-mobile call arrives (col. 2, lines 3-28). A server is considered here to be a component of a data processing system that handles databases. However, Ho is circuit switched and is silent regarding the use of data packets for transmission.

Wang discloses a method and system integrating wireless/wireline and circuit /packet networks for cellular /PCS services so that GSM subscribers roaming into CDMA networks using IP networks (col. 2, lines 48-59). Wang meets the following limitation:

- Sending the data by the wireline terminal to the server via a packet network to establish communication with the mobile terminal (Figure 4).

Ho and Wang are combinable because they share a common endeavor, namely, radio telecommunication system that seek to exclude the interaction with the HLR in routing a roaming mobile station. At the time of the applicant's invention it would have been obvious to modify Ho to include a server for handling data packets as done by Wang in order to in order to include IP networks.

Regarding claim 6, Wang meets the following limitation:

- Identifying the mobile identification number based on an identifier associated with the mobile terminal (col. 8, lines 6-21).

Regarding claim 7, Wang meets the following limitation:

- identifying the mobile identification number based on an Internet Protocol (IP) address associated with the server and the mobile terminal (col. 8, lines 6-21).

Regarding claim 8, neither Ho nor Wang meet the following limitation:

- The determining step comprises the step of identifying a home location register based on the identified mobile identification number.

However, the examiner takes Official Notice that it is well known to be able to identify the home location register based on the identified MIN and that it would have been obvious to

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modify Ho to include means for identifying the home location register using a MIN as this would provide for easier tracking of roaming mobile stations.

Regarding claims 11 and 12, the examiner takes Official Notice that it is well known to utilize a modem to establish data connections and it would have been obvious to modify the Ho / Wang combination to utilize a modem as this is a useful tool for establishing data packet communication.

Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al., in view of Farris et al.

Regarding claim 19, Wang discloses a method and system integrating wireless/wireline and circuit /packet networks for cellular /PCS services so that GSM subscribers roaming into CDMA networks using IP networks (col. 2, lines 48-59). Wang meets the following limitation:

- A memory including a first table including information for identifying a mobile identification number associated with the mobile terminal (col. 6, lines 28-44 where phone number-to-IP address is seen as a mobile identification number).

While Wang provides much of the second limitation, it is silent on the code and processor for running the code.

- code for receiving from the wireline terminal one or more data packets destined for the mobile terminal, and for determining a route that excludes a home node associated with the mobile identification number when a visited node serves the mobile identification number, and for establishing via the determined route a connection to the mobile terminal, and for sending the data packets on the established connection to the mobile terminal

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- a processor for running the code.

Farris discloses a packet data network voice call quality monitoring system. Farris is relied upon as a teaching reference for explaining “point code”. Farris shows it to be an information entity in the packet and affects the packet routing according to translation tables stored within a signaling transfer point (col. 7, lines 1-9). The point code is well known in the art, as is the processor for running the codes.

Wang and Farris are combinable because they share a common endeavor, namely methods for transporting packets. At the time of the applicant’s invention it would have been obvious to modify Wang to include point codes associated with the transporting of packets in order that the beginning and end points are readily defined.

Regarding claim 20, Wang meets the following limitation:

- the information in the first table includes the mobile identification number and an identifier associated with the mobile terminal (col. 6, lines 28-44).

Regarding claim 21, Wang meets the following limitation:

- wherein the information in the first table includes the mobile identification number and an identifier associated with the mobile terminal (col. 2, lines 28-44).

Allowable Subject Matter

6. Claims 25-27 are allowed.
7. The following is a statement of reasons for the indication of allowable subject matter:
Regarding claim 25, a server containing a second table including information for

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identifying a home location register associated with the mobile terminal was neither found, suggested, nor made evident by the prior art.

Claims 18 and 22-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 18, the pre-assigning a plurality of IP addresses to the server and configuring the server to associate one of the pre-assigned IP address with the mobile terminal was neither found, suggested, nor made evident by the prior art.

Regarding claim 22, the second table identifying a home location register associated with the mobile identification number was neither found, suggested, nor made evident by the prior art.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lewis et al. discloses methods and elements to reduce the number of queries to a foreign network element.

Gallant discloses a one- number communication system and service integrating wireline/ wireless telephone communication systems

Malmstrom discloses a system and method for a wireline/wireless network interface implementing a single number service.

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Any inquiry concerning this communication from the examiner should be addressed to Alan Gantt at telephone number (703) 305-0077. The examiner can normally be reached between 9:30 AM and 6 PM within the Eastern Time Zone. The group FAX number is (703) 872-9314.

Any inquiry of a general nature or relating to this application should be directed to the group receptionist at telephone number (703) 305-4700.

Alan T. Gantt
Alan T. Gantt

Nay Maung
NAY MAUNG
PRIMARY EXAMINER

June 20, 2002